

**BILLARDIERA SM. AND RHYTIDOSPORUM F. MUELL.
(PITTOSPORACEAE) IN NEW SOUTH WALES**

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(Received July 1973)

ABSTRACT

McGillivray, D.J. (National Herbarium of New South Wales, Royal Botanic Gardens, Sydney, Australia) 1975. *Billardiera* Sm. and *Rhytidosporum* F. Muell. (Pittosporaceae) in *New South Wales, Telopea* 1 (1): 55-57.—*Rhytidosporum* F. Muell. is reinstated: *R. alpinum* and *R. prostratum*, both endemic to New South Wales, are described as new species. Keys are given to the species of *Billardiera* and *Rhytidosporum* and the genera of Pittosporaceae in New South Wales.

This paper was prepared consequent to the paper by Bennett in Nuytsia 1 (3): 266-269 (1972) in which the genus *Marianthus* Huegel ex Endl. was synonymized under *Billardiera* Sm., and the necessary new combinations for Western Australian species were made.

***Rhytidosporum* F. Muell.**, Pl. Indig. Colony Victoria 1: 75 (1860).

TYPE OF THE GENUS: *R. procumbens* (Hook.) F. Muell.

The important differences between *Billardiera* sens. lat. and *Rhytidosporum* are in the ovary and fruit. *Billardiera* has numerous ovules, *Rhytidosporum* few to several; the fruit of *Billardiera* is oblong-cylindrical to globose; dehiscent or indehiscent, and many-seeded, whereas *Rhytidosporum* has a flattened roundish to broadly oblong capsule with few to several seeds. *Bursaria* differs from *Rhytidosporum* in its paniculate inflorescence and its stipitate ovary: the latter has flowers solitary or in corymbs and sessile ovaries.

***Rhytidosporum procumbens* (Hook.) F. Muell.**, Pl. Indig. Colony Victoria 1: 75 (1860).

BASIONYM: *Pittosporum procumbens* Hook. in Companion Bot. Mag. 1: 275 (1836).

SYNONYMY: *Bursaria procumbens* (Hook.) Putterlick, Syn. Pittosp.: 20 (1839); *Marianthus procumbens* (Hook.) Benth., Fl. Austral. 1: 117 (1863). *Pittosporum nanum* Hook. in Companion Bot. Mag. 1: 275 (1836). *Campylanthera ericoides* Lindl. in Mitchell, Three Exped. 2: 277 (1838). *Bursaria diosmoides* Putterlick, Syn. Pittosp.: 20 (1839). *Bursaria stuartiana* Klatt in Linnaea 28: 568 (1857).

***Rhytidosporum prostratum* D. McGillivray, sp. nov.**

Aff. *Rhytidosporo procumbente* (Hook.) F. Muell. sed caulibus non vel parce ramosis prostratisque, pedicellis filamentosis (8-) 10-12 mm longis et loculis 2-3 ovulatis differt.

HOLOTYPE: NEW SOUTH WALES: East of Robertson, near Gerringong Falls, F.A. Rodway NSW 90469, 10.1.1943. Plentiful, marshy moorland, abt. 2,000 ft. (600 m) alt. (Located in the National Herbarium of New South Wales). ISOTYPES: to be distributed to A, CANB, K, W.

Shrub with slender, unbranched or sparingly branched, prostrate stems (5-) 10-80 (-100) cm long, spreading from a swollen rootstock; young stems with a sparse arachnoideous indumentum. *Leaves* shortly petiolate, variable in outline from orbicular to linear, usually obovate to elliptical, (3-) 6-12 (-18) mm long, 2-5 (-7) mm wide; leaf-base attenuate; leaf-apex commonly tridentate with the mid-lobe larger, sometimes entire, acute; leaf-margin serrate in upper half of leaf to entire, briefly recurved; upper surface granulate, with scattered weak white hairs, mid-vein depressed, inconspicuous; lower surface glabrous, mid-vein distinct. *Inflorescence* a terminal corymb (overtopped by continuing vegetative growth) with (1-) 3-5 (-6) flowers, each flower subtended by a slender subulate bract, 2.5-4 mm long; pedicels filamentous, hirsute, (8-) 10-12 mm long; sepals hirsute, narrowly triangular, 2 mm long; petals elliptical, acute, 4 mm long, 1.4 mm wide, white, pale mauve outside; filaments narrowly elliptical with an acuminate apex, 2.5 mm long; anthers oblong-cordate 0.6 mm long; ovary sessile, compressed pyriform, style c. 0.8 mm long, ovules 2-3 per loculus. Fruit not seen.

DISTRIBUTION: NEW SOUTH WALES: Central Tablelands near Robertson; Southern Tablelands, Currockbilly. Occurring in heath or forest and woodland in moist situations, usually on sandy soils.

SELECTED SPECIMENS: CENTRAL TABLELANDS: Carrington Falls (Robertson), *Whaite* 813, 24.12.1950 (NSW); Barren Grounds Nature Reserve, *Rogers* NSW 130043, 3.1.1970. SOUTHERN TABLELANDS: Currockbilly Mt near Braidwood, *Boorman* NSW 122099, 2.1909.

Rhytidosporum alpinum D. McGillivray, sp. nov.

Aff. Rhytidosporo procumbente (Hook.) F. Muell. sed caulibus subterraneis, habitu humili tegetiformi, latitudine foliorum 2 mm excedenti, petalibus 4.5-7 mm longis, seminibus granulatis differt.

HOLOTYPE: AUSTRALIAN CAPITAL TERRITORY: Mt. Gingera, Bimberi Range, Cotter River District, *R. Pullen* 2547, 10.1.1961. Open damp flat among granite boulders in stunted *Eucalyptus pauciflora* woodland. Alt. ca. 6,000 ft. [1,800 m]. (Located in the National Herbarium of New South Wales). **ISOTYPE:** CANB.

Shrub up to 10 cm high with well-developed rhizomes. *Habit* spreading to mat-forming. *Stems* sparsely arachnoideous when young, soon becoming glabrous. *Leaves* obovate to elliptical, (lower leaves of each branchlet often subrotund), (2-) 6-12 (-15) mm long, (2-) 3-5 mm wide, leaf-base attenuate, leaf-apex acuminate or acute; leaf-margin entire or sometimes with serrulations in upper half, minutely ciliate, shortly recurved and slightly thickened; leaf surface glabrous; mid-vein depressed on upper surface, prominent on lower surface. *Flowers* solitary, terminal; peduncles short, sometimes bracteate, merging into pedicels; pedicels arachnoideous (2-) 3-5 mm long; sepals narrowly ovate to narrowly triangular 2.5-4 mm long; petals narrowly obovate to oblong 4.5-7 mm long, 1.5-2 mm wide, white, purplish on the outside, apex acute to acuminate; filaments sublinear, tapering in from near middle to apex, 3.5-4.5 mm long; anthers oblong 0.75-1 mm long; pistil at anthesis compressed ovoid, slightly shorter than the filaments; ovules 3-5 per loculus; style c. 0.8 mm long. *Fruit* a round flattened capsule 5-6 mm across, 5 mm long; seeds 2-3 per loculus, surface granulate.

DISTRIBUTION: Southern Tablelands in grassland, heath or woodland on acid soils at altitudes above 1,250 metres.

SELECTED SPECIMENS: SOUTHERN TABLELANDS: Mt. Gingera, A.C.T., *Moore* 2271, 4.2.1953 (NSW); Eastern slopes of Leura Gap, Bimberi Range, A.C.T., 35° 38', 148° 48', Alt. c. 4,500 feet [1,350 m], *Schodde* 1252, 17.1.1961 (NSW); Mt. Bimberi, *Cambage* 3303, 1.1912 (NSW); ¼ mile (0.4 km) NW. of The Blue Waterholes, Cave Ck., 1,230 m, *Rodd* 929 and *Coveny*, 12.12.1969 (NSW); alpine meadow c. 4,500 ft [1,350 m], Rules Point, N. of Kiandra, *Salasoo* 3504, 22.1.1969 (NSW); Tibeaud Creek Hut (at 5,100 ft. [1,530 m]) Upper Tumut River catchment, *M. Mueller* 1773, 13.1.1954 (MEL); Mt.

Kosciusko, *Kretschman* NSW 122100, 12.1892; $\frac{1}{2}$ mile [0.8 km] NW. of Round Mountain, 5 miles [8 km] ENE. of Tooma Reservoir, *Briggs* 2543, 10.2.1969 (NSW).

This species is described by Burbidge & Gray, Fl. Austral. Cap. Territory: 191, fig. 185 (1970), as *Marianthus* sp.

KEY TO THE SPECIES OF *BILLARDIERA* AND *RHYTIDOSPORUM* IN NEW SOUTH WALES

1. Shrubs with twining or flexuose stems. Leaves usually more than 2 cm long. Fruits oblong-cylindrical to globose. Seeds numerous *Billardiera* Sm.
2. Petals more than 20 mm long. Style 10 mm or more in length. Fruit becoming turgid and one-celled on ripening. Northern Tablelands (Tomalla Tableland and Barrington Tops), Southern Tablelands; also occurring in Victoria and Tasmania *Billardiera longiflora* Labill.
- 2.* Petals less than 18 mm long. Style less than 5 mm long. Fruit two-celled.
3. Flowers solitary. Sepals lanceolate-subulate. Coast, Tablelands, South Western Slopes (near Carabost); also in Queensland, Victoria and Tasmania *B. scandens* Sm.
- 3.* Flowers few to several in corymbs. Sepals ovate-acute. Central Western Slopes, Western Plains (near Griffith); also in Victoria and South Australia *B. cymosa* F. Muell.
- 1.* Shrubs with stems erect to prostrate, not twining or flexuose. Leaves less than 2 cm long. Fruits flattened, roundish to broadly oblong. Seeds few to several (<10) *Rhytidosporum* F. Muell.
4. Stems procumbent to erect, moderately branched; flowers 1-2 per inflorescence; pedicels 2-5 (-8) mm long.
5. Plants usually more than 10 cm high. Stems rarely subterranean. Leaves 2 mm or less in width. Coast, Tablelands, North Western Slopes (Tingha), Central Western Slopes (Temora area); also recorded from Queensland, Victoria and Tasmania *Rhytidosporum procumbens* (Hook.) F. Muell.
- 5.* Plants usually less than 10 cm high. Stems commonly subterranean. Leaves more than 2 mm wide. Southern Tablelands (including Australian Capital Territory) *R. alpinum* D. McGillivray
- 4.* Stems prostrate, unbranched or sparingly branched. Flowers 1-6 per inflorescence. Pedicels (8-) 10-12 mm long. Central Tablelands (near Robertson), Southern Tablelands (Currockbilly) *R. prostratum* D. McGillivray

KEY TO GENERA OF PITTOSPORACEAE IN NEW SOUTH WALES

1. Fruit dry, dehiscent.
2. Anthers shorter than filaments, opening by longitudinal slits. Petals white, cream, yellow or reddish.
3. Fruits with thick leathery valves, usually more than 1 cm long.
4. Seeds not winged, viscous. Petals less than 2 cm long *Pittosporum*
- 4.* Seeds winged, not viscous. Petals 3-4 cm long *Hymenosporum*
- 3.* Fruits with thinly leathery to crustaceous valves, less than 1 cm long.
5. Shrubs usually more than 50 cm high. Branches usually spiny. Inflorescence paniculate *Bursaria*
- 5.* Shrubs less than 50 cm high. Branches never spiny. Inflorescence 1-2-flowered or corymbose *Rhytidosporum*
- 2.* Anthers longer than filaments, opening by terminal pores. Petals blue *Cheiranthra*
- 1.* Fruits succulent, indehiscent.
6. Shrubs with twining or flexuose, non-spiny branches. Fruits oblong-cylindrical to globose *Billardiera*
- 6.* Shrubs with spiny branches. Fruits globose *Citriobatus*

ACKNOWLEDGEMENTS

I wish to thank Mr M. Gray, Herbarium Australiense, Canberra for reading the manuscript and suggesting several improvements.